3G CHANGE REQUEST

TS 25.301 CR **007**   Current Version: 3.1.0

3G specification number ↑   *↑ CR number as allocated by 3G support team*

For submission to TSG RAN#5   for approval   **X**   *(only one box should*
list TSG meeting no. here ↑   for information   *be marked with an X)*

Proposed change affects: USIM ☐   ME **X**   UTRAN **X**   Core Network ☐
(at least one should be marked with an X)

Source:	TSG-RAN WG2	**Date:**	03/08/99

Subject: Removal of Quick repeat from RLC functions

3G Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	
A	Corresponds to a correction in a 2G specification	
B	Addition of feature	
C	Functional modification of feature	**X**
D	Editorial modification	

Reason for change: It was decided that quick repeat is done by not RLC but by RRC at the TSG-RAN WG2#5. Hence it is proposed to remove quick repeat from RLC functions.

Clauses affected: 5.3.2.2

Other specs affected:

Other 3G core specifications		→ List of CRs:	
Other 2G core specifications		→ List of CRs:	
MS test specifications		→ List of CRs:	
BSS test specifications		→ List of CRs:	
O&M specifications		→ List of CRs:	

Other comments:

help.doc

<---------- double-click here for help and instructions on how to create a CR.

5.3.2.2   RLC Functions

- **Connection Control.** This function performs establishment, release, and maintenance of a RLC connection.

- **Segmentation and reassembly.** This function performs segmentation/reassembly of variable-length higher layer PDUs into/from smaller RLC Payload Units (PUs). One RLC PDU carries one PU or, in case header compression is applied several RLC PUs. The size oft the smallest retransmission unit shall be determined by the smallest possible bit rate. The RLC PDU size is adjustable to the actual set of transport formats.

- **Header compression**. The feature to include several Payload Units into one RLC PDU is referred to as RLC header compression. RLC header compression can be applied for acknowledged data transfer service. Its applicability shall be negotiable between network and UE. Application of RLC header compression is optional for the network but it shall be supported by the UE mandatory.

- **Concatenation.** If the contents of an RLC SDU does not fill an integer number of RLC PUs, the first segment of the next RLC SDU may be put into the RLC PU in concatenation with the last segment of the previous RLC SDU.

- **Padding.** When concatenation is not applicable and the remaining data to be transmitted does not fill an entire RLC PDU of given size, the remainder of the data field shall be filled with padding bits.

- **Transfer of user data.** This function is used for conveyance of data between users of RLC services. RLC supports acknowledged, unacknowledged and transparent data transfer. Transfer of user data is controlled by QoS setting.

- **Error correction.** This function provides error correction by retransmission   (e.g. Selective Repeat, Go Back N, or a Stop-and-Wait ARQ) in acknowledged data transfer mode.

- **In-sequence delivery of higher layer PDUs**. This function preserves the order of higher layer PDUs that were submitted for transfer by RLC using the acknowledged data transfer service. If this function is not used, out-of-sequence delivery is provided.

- **Duplicate Detection.** This function detects duplicated received RLC PDUs and ensures that the resultant higher Layer PDU is delivered only once to the upper layer.

- **Flow control**. This function allows an RLC receiver to control the rate at which the peer RLC transmitting entity may send information.

- **Sequence number check (Unacknowledged data transfer mode).** This function guarantees the integrity of reassembled PDUs and provides a mechanism for the detection of corrupted RLC SDUs through checking sequence number in RLC PDUs when they are reassembled into a RLC SDU. A corrupted RLC SDU will be discarded.

- **Protocol error detection and recovery**. This function detects and recovers from errors in the operation of the RLC protocol.

- **Ciphering**. This function prevents unauthorized acquisition of data. Ciphering is performed in RLC layer for non-transparent RLC mode.

   The following potential function(s) are regarded as further study items:

- **Suspend/resume function**. Suspension and resumption of data transfer as in e.g. LAPDm (cf. GSM 04.05).

   ~~**Quick repeat (C plane only).** This function provides mechanisms to transmit unacknowledged mode data PDUs several times.~~

   [Note: Whether quick repeat function is performed by layer 3 or by RLC sublayer is FFS..]